ERCB Energy Resources Conservation Board

Calgary Office Suite 1000, 250 – 5 Street SW, Calgary, Alberta, Canada T2P 0R4 Toll Free 1-855-297-8311 Fax 403-297-7336 www.ercb.ca

Directive 011

Release date: March 12, 2013
Effective date: May 1, 2013
Replaces previous edition issued April 1, 2005

Licensee Liability Rating (LLR) Program: Updated Industry Parameters and Liability Costs

The Energy Resources Conservation Board (ERCB/Board) has approved this directive on March 12, 2013.

<original signed by>

Brad McManus
Acting Chair

---

1 What's New in This Edition

This updated directive replaces the version issued on April 1, 2005.

As provided for in *Directive 006: Licensee Liability Rating (LLR) Program and Licence Transfer Process*, the Energy Resources Conservation Board (ERCB) reviews, updates, and publishes the industry parameters and the regional abandonment and reclamation costs used in the LLR calculation as required.

This update is being released as part of a 3-year phase in of updated parameters and costs. For more information on this please see Bulletin 2013-09, released March 12, 2013, and available on the ERCB's website at www.ercb.ca.

2 Effective Dates

The LLR formula parameters and costs specified in this directive are effective May 1, 2013, and remain in effect until rescinded by the ERCB. The ERCB typically updates and publishes parameters and costs annually in April.

3 Industry Deemed Asset Parameters

The industry deemed asset parameters used in the LLR Program are based on industry information and are as follows:

- The *industry netback* is a rolling 3-year provincial industry average netback. The industry netback is $161.05 per m^3 OE.
- The *shrinkage factor* is a rolling 3-year provincial industry average. The shrinkage factor is 14.19% (multiply gas production by 0.8581 to obtain sales gas volumes).

- The *m^3 OE conversion factor* is rolling a 3-year provincial industry average. The m^3 OE conversion factor is 1.1681 10^3 m^3 gas/m^3 oil (divide sales gas volumes by 1.1681 to convert gas volumes into oil volumes).

4 Industry Deemed Liability Parameters

The regional well abandonment costs used in the LLR formula are based on information provided to the ERCB through an annual well abandonment cost review conducted by a third party. The facility abandonment cost and well and facility reclamation costs used in the LLR formula are based on the most recent well and facility abandonment and reclamation cost assessment conducted by the ERCB.

As indicated in appendices 11 and 12 of *Directive 006*, the LLR Program established separate maps for determining regional abandonment and regional reclamation costs.

5 Well Abandonment Cost Parameters

The abandonment liability for a well considers its geographic location based on the Regional Abandonment Cost Map, depth, downhole completion scenario, and where applicable, the number of events requiring abandonment, the costs to address groundwater protection, surface casing vent flows, and gas migration. The process for calculating a well's abandonment liability is detailed in Appendix 6 of *Directive 006*.

6 Regional Well Abandonment Cost Tables

The basic abandonment cost of a well in each geographic area, by depth and downhole completion scenario, is as follows:

Area 1. Medicine Hat

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	$9,067	$15,125	$25,861	$29,464
1200–1999	$9,267	$15,820	$28,397	$34,076
2000–2499	$9,633	$16,558	$40,402	$45,369
2500–2999	$10,233	$18,252	$44,183	$51,668
3000 +	$10,333	$21,837	$61,213	$72,545

Area 2. Calgary/Edmonton

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	$9,233	$15,292	$27,520	$30,952
1200–1999	$9,433	$15,987	$30,270	$36,168
2000–2499	$9,800	$16,714	$41,461	$46,235
2500–2999	$10,400	$18,398	$45,396	$52,881
3000 +	$10,500	$22,082	$62,950	$74,282

Area 3. Drayton Valley/Grand Prairie

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	$9,833	$15,592	$31,104	$35,003
1200–1999	$10,367	$17,021	$38,323	$42,153
2000–2499	$10,467	$19,947	$45,807	$52,448
2500–2999	$10,667	$21,015	$57,212	$65,293
3000 +	$10,900	$25,525	$67,826	$80,357

Area 4. Lloydminster

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	$9,067	$15,125	$25,746	$29,618
1200–1999	$9,267	$15,820	$28,397	$34,076
2000–2499	$9,633	$16,558	$40,402	$45,369
2500–2999	$10,233	$18,252	$44,183	$51,668
3000 +	$10,333	$21,837	$61,213	$72,545

Area 5. Athabasca/Peace River

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	$9,300	$15,402	$28,750	$31,942
1200–1999	$9,500	$16,059	$32,797	$37,360
2000–2499	$9,867	$17,014	$41,773	$46,548
2500–2999	$10,467	$18,731	$45,709	$53,193
3000 +	$10,567	$22,425	$63,152	$74,724

Area 6. High Level

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	$13,000	$18,724	$35,427	$38,671
1200–1999	$13,367	$20,214	$44,119	$48,431
2000–2499	$13,667	$21,303	$48,590	$55,423
2500–2999	$14,200	$22,759	$57,530	$66,884
3000 +	$14,733	$25,048	$71,036	$84,659

Where applicable, the following parameters are to be applied:

- Groundwater protection cost $32,296
- Vent flow repair cost $77,036
- Gas migration cost $44,623
- Multiple event sequence factor 0.25%

7 Facility Abandonment Cost Parameter

The facility abandonment cost parameter for each well equivalent is $10,000.

8 Well and Facility Regional Reclamation Cost Map

The reclamation liability for a well or facility considers its geographic location based on the Regional Reclamation Cost Map and its well equivalent. The process for calculating a well or facility's reclamation liability is detailed in appendix 6 of *Directive 006*.

The cost per well or well equivalent in each of the seven regional reclamation cost areas is as follows:

- Grasslands Area East $13,200
- Grasslands Area West $20,200
- Parklands Area $21,800
- Foothills Area $23,400
- Alpine Area $33,700
- Western Boreal Area $27,200

- Boreal Area $19,100

A licensee is required under part 1.1 of the *Oil and Gas Conservation Regulations* to provide any security deposit amount resulting from the changes contained in this directive in accordance with ERCB monthly and transfer LLR assessment requirements.

The parameters and costs in this directive are used to calculate deemed assets and liabilities in accordance with formulas contained in *Directive 006*.

Inquiries regarding the requirements of this directive or any aspect of the LLR Program should be directed by e-mail to LiabilityManagement@ercb.ca or to the Liability Management Group's help line at 403-297-3113.